





# Rehabilitation of the Saga Bridge in Westport, CT



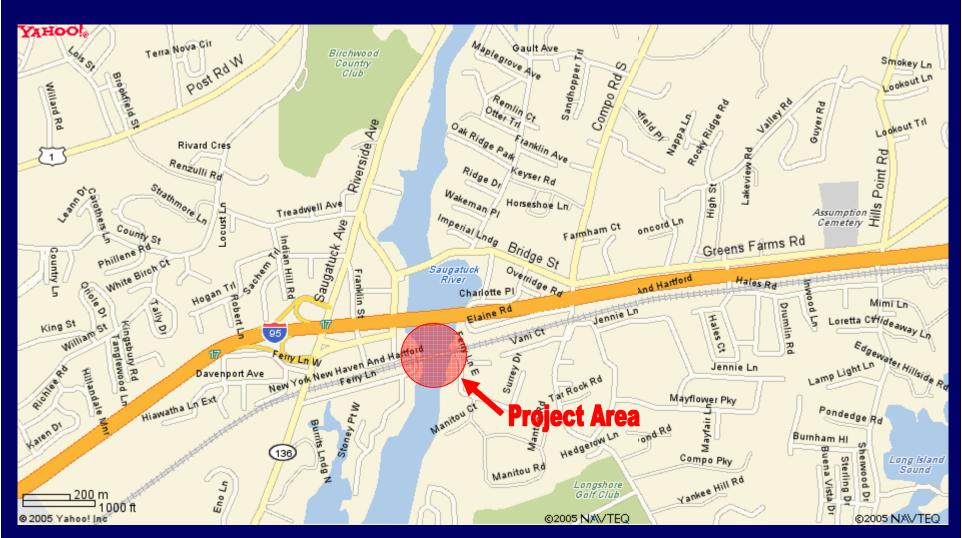
Metro North Railroad

New Haven Main Line

April 24, 2006







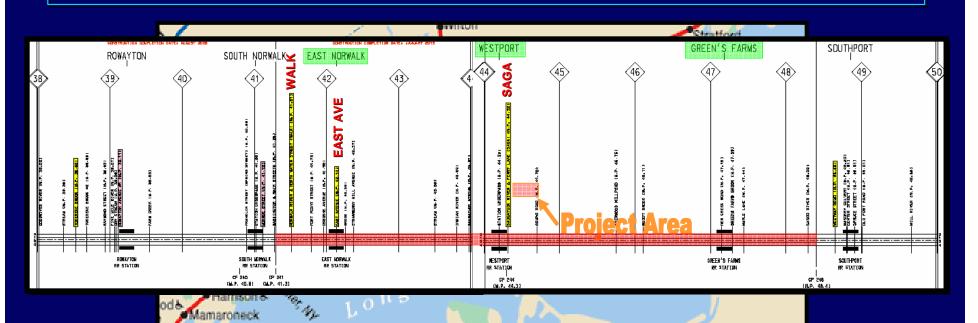




 Rehabilitation of The Metro-North Bridge over the Saugatuck River is part of larger project that includes:

Rehabilitation of seven miles of catenary power systems (C1A),

Rehabilitation of the Walk Bridge in Norwalk Replacement of the East Avenue Bridge in Norwalk







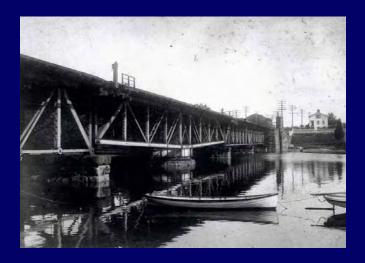
## Metro-North Railroad Bridge over the Saugatuck River

- The six span bridge is 455 feet long and carries four (4) tracks
- Span 3 is a 108'-6" rolling lift moveable span which opens to provide clearance for marine traffic.
- Three (3) foot wide pedestrian walkway on south side of bridge.
- Rail traffic on normal weekday schedule:
  - 36 eastbound Metro-North trains
  - 36 westbound Metro-North trains
  - 12 eastbound and 13 westbound AMTRAK trains
  - One freight line train eastbound and westbound

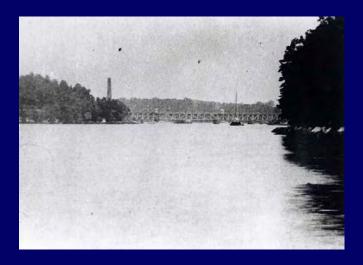








History



- In 1844 the New York and **New Haven Railroad built** first bridge at site.
- Original bridge was a two track swing bridge
- New York, New Haven and Hartford Railroad **Company expanded** shoreline route to four **tracks from 1898 to 1908**
- **Present Saga Bridge** built in 1905





- Existing bridge exhibits deterioration of the steel in the superstructure and lower support steel of the movable span.
- Lower support steel gets submerged during high tide.









 Counterweight and portion of the moveable span is also submerged during openings.









 Existing drive system is old and difficult to maintain and operate.











- Major repairs have been made to the bridge over the 100+ years it has been in service.
- Past rehabilitation has included steel repairs on movable spans and support steel, bearings, segmental girder and rack girder.
- Steel sections have also been repaired as part of the ongoing maintenance repairs.





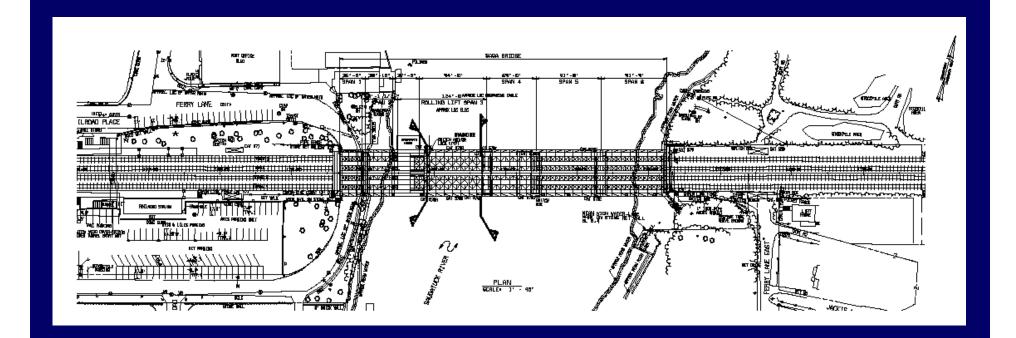


- Replace the existing moveable spans
- Rehabilitate existing steel in approach spans
- Construct new operator's house and new drive system
- Construct new pedestrian walkway
- Replace existing fender system
- Replace the existing track (ties and rails) for the entire bridge





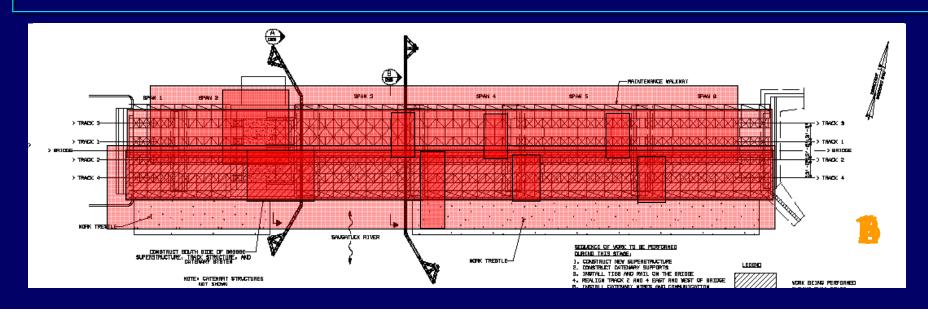
General Plan Showing Proposed Rehabilitation







- Duration of proposed construction is approximately 4 years
- Projected Start Spring 2010
- Construction to consist of two stages. Each stage will work on two tracks with the other two tracks open to train traffic.







## Marine Traffic

- Limited bridge openings and channel closures will be scheduled for off season to maximum extent possible Project Area
- Periods during construction that will limit bridge openings.
- Construction operations that impact channel:
  - Removal of the existing moveable span above change in the existing moveable span above
  - · Construction of piers 2 and
  - · Placement of the new move able span above channel



#### Pedestrian Walkway

- The new pedestrian walkway will remain on the south side of the bridge. A new access walkway will be constructed on the north side of the bridge for access to the operator's house.
- The pedestrian walkway will be 5 feet wide.
- During the construction of the south half of the bridge, there will be no pedestrian access on the bridge.
- The new pedestrian walkway will have safety gates and video monitoring.
- A safety fence will be constructed between the pedestrian walkway and the railroad tracks.





## Local Traffic - Ferry Lane

- Ferry Lane, directly under bridge, may be closed during off-peak times
- Traffic along Ferry Lane will be one-way directional to account for peak commuting hours









# Impact to Rail Service

- Seven miles of track will be restricted to two track operation between East Norwalk station to Green's Farm station
- Temporary platforms will be required at East Norwalk, Westport and Green's Farm stations









